
Shaping Multiple Values: Research Characterization of DRS Conferences

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ABSTRACT

The time-space distribution of conference papers, significant authors, and research themes were studied from three perspectives using the bibliometric method to analyze the research characteristics of DRS conferences. Regarding the papers' time-space distribution, it exhibits a general rising trend in the time sequence and mostly concentrates on the design of inclusion, happiness, and health. In terms of significant authors, two academic communities, one centered on Lancaster University and the other on the Delft University of Technology, were established. Design education, service design, participatory design, inclusive design, design methodology, and social design are the six main research themes that have emerged from DRS research. The main traits of DRS conferences are shaping multiple values, as this study demonstrates.

Keywords: DRS conferences, Research characteristics, Bibliometric

INTRODUCTION

The Design Research Society is an academic organization that was established in the 1960s during the British design method movement to further design research. It was the first organization in the world to do comprehensive research on all facets of the design process (Hu & Shi, 2022). Because of its professional and cutting-edge focus, the Design Research Society's biennial DRS conference is acknowledged by the international design research academic community for its academic contributions and value. Beck (Beck & Chiapello, 2018) used the DRS conference as the focus of their investigation into the dissemination of Schön's scholarly ideas in the field of design studies. Meanwhile, design studies are increasingly using bibliometric methodologies, which offer the benefit of big data analysis. Bibliometric techniques were utilized by Chai and Xiao (Chai & Xiao, 2012) to analyze the Design Studies research landscape. Xu Jiang (Xu, 2019) builds a knowledge map of design meta-research using a bibliometric technique. DRS conferences are intended to offer a public forum for design research scholars from all around the world to discuss recent advancements in the field. This study examines the research characteristics of the last three DRS conferences using a bibliometric approach (2022, 2020, 2018).

REVIEW OF PREVIOUS DRS CONFERENCES AND RESEARCH METHODS

Since 1971, DRS Conferences, which reflect the broad field of design research, have been held; a summary of the last 10 conferences is provided in Table 1. Value, thinking, and future are phrases that frequently appear in the conference topics, which reflects a strong sense of exploration and speculativeness.

The papers published in the most recent three DRS conferences (DRS-2022, DRS-2020, and DRS-2018), totaling 679 papers, were chosen as the data set for this study. The research data in this paper were gathered from the official digital library of DRS conferences. With the use of the bibliometric information visualization tool VOSviewer, the research characteristics of DRS conferences were examined from three aspects using a bibliometric approach: the time-space distribution of conference papers, significant authors, and research themes (van Eck & Waltman, 2010).

THE TIME-SPACE DISTRIBUTION OF CONFERENCE PAPERS

Timing Distribution

Figure 1 depicts the basic organization of the papers from the previous three DRS conferences following analysis. DRS-2018 received 470 submissions, of which 218 were accepted and published, as can be seen in the figure. Of the 269 submissions to DRS-2020, 144 were accepted and published. 317 of the 588 submissions to DRS-2022 were accepted and published. After the temporary decline of DRS-2020, there is a general rising tendency in the quantity of publications. From 46% in DRS-2018 to 54% in DRS-2022, the acceptance rate increased and remained stable.

Space Distribution

The DRS conference provides contributors with a thorough research track that has strong directional guidance each year. After analysis, there are 25 Tracks in DRS2018, and the Tracks with high publication volume are Tools of Design(15), Health and Wellbeing by Design(15), Design Education(14),

Table 1. Summary of the most recent DRS 10 conference.

Conference Title	Theme
DRS-2022	Bilbao
DRS-2020	Synergy
DRS-2018	Catalyst
DRS-2016	Future-Focused Thinking
DRS-2014	Design's Big Debates
DRS-2012	Uncertainty Contradiction Value
DRS-2010	Design and Complexity
DRS-2008	Undisciplined!
DRS-2006	Wonderground
DRS-2004	Futureground

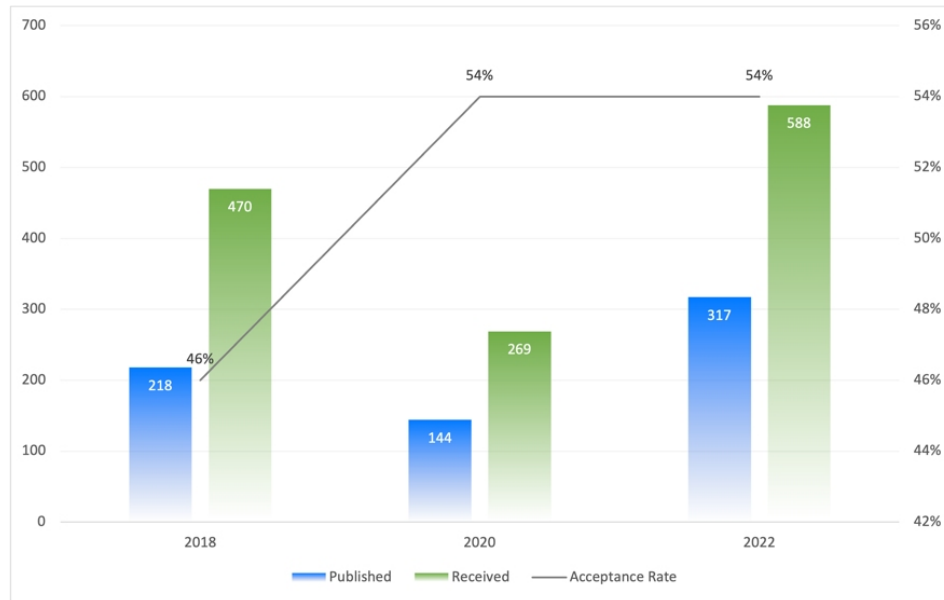


Figure 1: Timing distribution of the papers from the most recent three DRS conferences.

Inclusive Design(11), Design, Research and Feminism(11). DRS2020 contains a total of 40 Tracks. Inclusive Design, Sustainability, Design Innovation Management, Wellbeing, Happiness and Health, Global Health, Design Pedagogy, Tangible, Embedded, and Networked Technologies are the high volume Tracks in DRS2020, each with 6 articles. 52 Tracks are in DRS-2022, and the high-volume tracks are Rethinking design for a complex world(16), Futures of design education(14), Design methods and transdisciplinary practices(12), Design for policy and governance(11), Wellbeing, happiness, and health(11), Inclusive design practice and healthy aging (11), Valuing the qualitative in design and data(11).

Overall, the DRS conference revolves around design for happiness, health, and inclusion, with a high volume of Track postings around design for health and well-being, design education, inclusive design, sustainable design, design management, game design, policy and governance design, and healthy aging. It is worth mentioning that in the 2022 session, there are Tracks related to technology, materials, artificial intelligence, and other new materials and tools, such as Biodesign, AI and the conditions of design, Legal Design, Designing with bodily materials, food+ design, etc.

SIGNIFICANT AUTHORS

The significant scholars who have made excellent contributions and garnered the most attention in the area are shown through an examination of the authors of the papers from the previous three DRS conferences. Table 2 shows the outcomes of data cleaning and publication analysis of the authors. With 11 articles published, Paul Coulton of Lancaster University in the UK

Table 2. Significant authors.

Author	Institute	Research Direction	Number of Articles
Paul Coulton	Lancaster university	Design fiction	11
Farnaz Nickpour	Liverpool university	Inclusive design	7
Emmanuel Tseklevs	Lancaster university	healthcare design	7
Geke Ludden	University of Twente	Emotion and experience	6
Rebecca Price	Delft University of Technology	Design thinking	5
Rachel Cooper	Lancaster university	Design management	5
Peter Lloyd	Delft University of Technology	Design process	5
Joseph Lindley	Lancaster university	HCI	5

has the most. Both Lancaster University's Emmanuel Tseklevs and Liverpool University's Farnaz Nickpour had seven papers. Six essays were written by Geke Ludden of the University of Twente. Peter Lloyd (Delft University of Technology), Rebecca Price (Delft University of Technology), Rachel Cooper (Lancaster University), and Joseph Lindley (Lancaster University) have all published five publications. Two institutions, Lancaster University and the Delft University of Technology, respectively, are at the center of the academic community.

RESEARCH THEME

In order to examine the research themes of the previous three DRS conferences, the keywords of the papers in the database were extracted, as shown in Figure 2, and the keyword co-occurrence analysis feature of VOSviewer was employed. The six core research themes of the DRS conferences—design education, service design, participatory design, inclusive design, design methods, and social design—were identified by clustering the keyword co-occurrence network.

The first theme, Design Education, is focused on the study of design education methods. From the Bauhaus era to the present, studio pedagogy has been one of the concerns in the field of design education due to design's strong practical features and the wealth of tacit knowledge it includes. Because of the COVID-19 epidemic, the studio's prominence in design education has been called into question. Instead of using physical studios for studying and teaching, educators are instead using distance learning and online teaching techniques (Marshalsey & Sclater, 2020). Additionally, one of the focuses of this theme is the study of reflective and critical pedagogy in design education.

The second theme, Service Design, focuses on how service design is used in various fields to provide value. The practice of service design is centered on brand design, innovation in public organizations, design for happiness and well-being, social governance, public health, etc. The application of design thinking in organizational innovation and public affairs is the most concerning of them.

Participatory Design is the third theme. Participatory design's two main themes are "Participation" and "Empowerment." More emphasis is placed on participatory design's mechanisms as a co-creative strategy in several fields of

and “uncaring” ways of knowing (Buchanan, 2001). This designerly cognitive paradigm emphasizes the study of social design practices as a means of comprehension and knowledge acquisition, turning society into the object of design.

In 1973, Horst Rittel and Melvin Webber first introduced the wicked problem as a new problem type. The components of complexity, diversity, and uncertainty all interact and overlap in this kind of problem (Head & Alford, 2015). According to Donald Schon, the design process engages in reflective practice and a continuous conversation with the context when attempting to solve such ill-structured problems. In 2011, Dorst made the argument that design is a framing frame (Dorst, 2011) and that design, as a “frame,” may frame not only a product to solve the micro-cycle design challenge but also frame an enterprise to solve the full-cycle design process. Design is the iterative process of framing and reframing between HOW and VALUE, and the DRS conference is focusing on design issues in the fields of design education, service design, participatory design, inclusive design, design methods, social design, etc., and shaping multiple values through the way of value construction.

CONCLUSION

This study, which is based on the bibliometric approach, analyzes the research characteristics of the last three DRS conferences from three perspectives: the time-space distribution of conference papers, significant authors, and research themes, revealing its key characteristic: shaping multiple values. The spatio-temporal distribution of papers, which mostly focuses on the design of happiness, health, and inclusion in terms of space, exhibits an overall rising tendency in terms of chronology. A scholarly community focused on two universities, Lancaster University and the Delft University of Technology, respectively, has emerged in terms of significant authors. Design education, service design, participatory design, inclusive design, design methodology, and social design are the six main research themes that have emerged from DRS research. The main traits of DRS conferences are shaping multiple values, as this study demonstrates.

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